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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,193

04/26/2006

Masaki Soda

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3713

7590

08/29/2008

QUINN EMANUEL

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EXAMINER

PICKARD, ALISON K

ART UNIT

PAPER NUMBER

3676

MAIL DATE

DELIVERY MODE

08/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,193	<b>Applicant(s)</b> SODA ET AL.	
	<b>Examiner</b> Alison K. Pickard	<b>Art Unit</b> 3676	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

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### **DETAILED ACTION**

1. Applicant is advised that should claim 6 be found allowable, claim 8 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgmann (3,973,779).

Burgmann (see Figs. 4 and 5) discloses a sealing device comprising a rotor 25d mounted to a shaft 3 and a stator 6d mounted to a housing 2. A movable floating ring 19d is mounted in a seal gap formed between the rotor and stator. The rotor has a seal lip 10d that contacts a face of the stator (at 11d) when the shaft is stopped and that is spaced from the face due to centrifugal force when the shaft rotates (see col. 7, lines 30-33 and 56-59). The floating ring has an annular notch (e.g. at 22d) and a concavoconvex pattern 23d on its surface. As seen in the Figures, the gap and ring varies in diameter from the left to the right. The floating ring appears to have a length (in an axial direction) greater than a thickness (in a radial direction). However, Burgmann does not specifically disclose the ratio of at least 3 to 1. It is not considered inventive to discover

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the optimum or workable ranges by routine experimentation absent some showing of criticality. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the length at least 3 times the thickness.

Regarding claims 2 and 3, Burgmann does not disclose the material used. The selection of a known material based on its suitability for its intended use is considered obvious. See *In re Leshin*, 125 USPQ 416 (CCPA 1960). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the ring from fluorine resin.

#### ***Response to Arguments***

4. Applicant's arguments filed 7-8-08 have been fully considered but they are not persuasive.

Applicants argue that ring 19d is not a floating ring because it does not rotate. The examiner disagrees. First, the claim does not require the ring to rotate. The claim states a "movable floating ring," which Burgmann discloses. Ring 19d may be prevented from rotating but it is capable of moving/floating in at least a radial direction (see col. 5, lines 29-33). Kuroiwa and McKenna provide additional evidence that anti-rotation features can be used with "floating" rings. Applicants argue that the seal lip is not spaced from the face when it rotates. The examiner disagrees. Burgmann clearly states that the lip is allowed to lift from the sliding surface during rotation (see col. 7, lines 30-33). Applicants argue that Burgmann does not disclose the claimed length/thickness ratio. The examiner has already stated that Burgmann does not appear to specifically disclose this ratio. However, Burgmann does show a ring with an axial length greater than a radial thickness. The examiner disagrees that the ratio shown is closer to 1/2

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than 1/3. Regardless, the ratio of the dimensions appears to be close enough to be obvious.

There are other reasons the dimensions could be changed. For example, the clearance between the housing and shaft may be smaller and require a radially thinner ring/seal assembly overall.

Applicants have also argued that ring 19 contacts elements 18 and 23 and there is no gap. The examiner disagrees. There is nothing in the claim language that requires the floating ring to be out of contact with the stator. Element 23 is the groove formed in the ring 19. And there IS a gap between ring 19 and rotor 25d as required by the claim. The groove 23d helps prevent leakage through that gap during rotation (e.g. see col. 5, lines 42-46).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062. The examiner can normally be reached on M-F (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alison K. Pickard/  
Primary Examiner, Art Unit 3676

AP